AMENDMENTS TO THE CLAIMS

1. (currently canceled)

2. (currently canceled)

3. (currently canceled)

4. (currently canceled)

5. (currently canceled)

6. (currently canceled)

7. (currently canceled)

8. (currently canceled)

9. (currently canceled)

10. (previously withdrawn and canceled)

11. (currently canceled)

12. (currently canceled)

13. (currently canceled)

14. (currently amended) [~~The method of claim 11~~] A method for providing a glass preform for use as a source for drawing an optical fiber, the method comprising the steps of:

collecting a plurality of first glass rods into a substantially contiguous bundle, wherein each of said first glass rods comprise a chemical composition and a substantially uniform shape;

inserting said contiguous bundle into a glass tube, wherein said glass tube has an inside diameter chosen to contain said contiguous bundle, forming thereby a preform assembly;

removing and replacing one or more groups of contiguous first glass rods with an equivalent number of groups of contiguous second glass rods, wherein said one or

more groups consists of a single, contiguous core bundle of second glass rods inserted about a central longitudinal axis of said [~~perform~~]preform assembly, wherein each of said second glass rods comprise a chemical composition and a substantially uniform shape, and wherein said second glass rod chemical composition comprises one or more rare-earth dopant elements, said step of removing and replacing further including inserting a stepped template against one end of each of said first glass rods, said stepped template having one or more steps or plugs, said steps or plugs acting to partially displace said one or more groups of first glass rods; and

heating said preform assembly to a glass fusion temperature and causing said preform assembly to fuse to form a solid glass preform such that said chemical composition of each of said first and said second glass rods is maintained in a location proximate to, or about coincident with, the position of each of said glass rods within said contiguous bundle.

15. (currently amended) The method of claim 14, wherein said contiguous core bundle is formed by inserting and replacing successively smaller bundles of second glass rods along said longitudinal axis, wherein each successive bundle of second glass rods comprising a rare-earth composition which is different than each preceding bundle, thereby providing a [~~perform~~]preform core region having a graded or structured rare-earth-dopant concentration.

16. (currently amended) The method of claim 14, wherein said contiguous core bundle is formed by inserting and replacing successively smaller bundles of glass rods along said longitudinal axis, wherein each successive bundle of glass rods comprises a fractional combination of second glass rods distributed in a fixed quantity of first glass rods, and wherein each smaller bundle consists of a larger fraction of second glass rods than each preceding bundle thereby providing a [~~perform~~]preform core region having a graded or structured rare-earth-dopant concentration.

17. (currently amended) The method of claim [~~9~~]14, wherein said one or more groups consists of a single elliptical bundle of first glass rods, and wherein said second glass

rods further comprise a glass having a coefficient of thermal expansion different than said first glass rods.

18. (currently amended) The method of claim **[~~9~~]**14, wherein said one or more groups comprise two equal and opposing radial sections of first glass rods, and wherein said second glass rods further comprise a glass having a coefficient of thermal expansion different than said first glass rods.

19. (original) The method of claim 18, wherein said radial sections are sectors of an annulus.

20. (original) The method of claim 18, wherein said radial sections are circular sections.

21. (currently amended) The method of claim **[~~2~~]**14, wherein said glass tube is evacuated and sealed at first and second ends such that said contiguous bundle is enclosed under an internal pressure below 1 atmosphere, and wherein further said contiguous bundle is restrained at each end within said sealed glass tube by a porous packing plug.

22. (original) The method of claim 21, wherein said porous packing plug comprises a high purity glass wool.

23. (previously amended) The method of claim 22, wherein said step of heating further comprises moving said first end of said preform assembly longitudinally into a heated zone of a furnace means such that fusion begins at said first end and progresses toward said second end as said preform assembly is moved through said heated zone.

24. (original) The method of claim 22, wherein the furnace means is a tube furnace.

25. (original) The method of claim 23, further including rotating said preform assembly.

26. (original) The method of claim 25, wherein said preform assembly is heated to a temperature of about 1500°C.

27. (original) The method of claim 23, further including maintaining an external pressure within said furnace greater than one atmosphere.

28. (currently canceled)

29. (currently canceled)

30. (previously withdrawn and canceled)

31. (original) The method of claim 14, wherein said rare-earth dopants are present in concentrations ranging from about 0.01% by weight to about 5% by weight.

32. (previously amended) The method of claim 14, wherein said second glass rods further comprise a co-dopant species for increasing the solubility of said one or more rare-earth dopant elements and for adjusting a refractive index.

33. (currently canceled)

34. (previously amended) A method for providing a glass preform for use as a source for drawing an optical fiber having a reduced capacity for propagation of amplified spontaneous emission, the method comprising the steps of:

collecting a plurality of first glass rods into a substantially contiguous bundle, wherein each of said first glass rods comprises a chemical composition and has a substantially uniform shape; and

removing and replacing one or more groups of contiguous first glass rods with an equivalent number of groups comprising second glass rods, said second glass rods comprising a chemical composition and having a substantially uniform shape, said second glass rods comprising a physical or chemical property having a different value than a value of said same physical or chemical property of said first glass rods, and wherein said second glass rods comprise a means for eliminating or substantially reducing propagation of amplified spontaneous emission;

heating said contiguous bundle to a glass fusion temperature and causing said contiguous bundle to fuse to form a solid glass preform such that said chemical

composition of each of said first glass rods is maintained in a location proximate or about coincident with a position of each said glass rods within said contiguous bundle.

35. (original) The method of claim 34, wherein said means for eliminating or substantially reducing propagation of amplified spontaneous emission comprises one or more dopant compounds.

36. (original) The method of claim 34, wherein said means for eliminating or substantially reducing propagation of amplified spontaneous emission is substantially restricted to an outer portion of an inner cladding.

37. (previously withdrawn and canceled)

38. (previously amended) The method of claim 35, wherein said means for eliminating or substantially reducing propagation of amplified spontaneous emission comprises a metal dopant.

39. (currently canceled)

40. (currently amended) **[**~~The method of claim 39,~~**]** A method for providing a glass preform for use as a source for drawing an optical fiber, the method comprising the step of:

providing first and second quantities of glass rods, wherein each of said glass rods has a substantially uniform shape, said first quantity comprising one or more rare-earth dopant elements, said second quantity comprising first and second refractive indices, wherein said first refractive index is greater than a target refractive index, and said second refractive index is less than said target refractive index;

collecting said first quantity of glass rods into a substantially contiguous bundle of rods and forming thereby a first bundle, said first bundle for forming a preform core region having a substantially uniform radial and longitudinal chemical composition;

uniformly surrounding said first bundle with said second quantity of glass rods forming thereby a contiguous and substantially concentric cylindrical annulus about said first bundle, wherein said first and second refractive indices are distributed throughout said cylindrical annulus so as to provide an average refractive index within said cylindrical annulus substantially equal to said target refractive index, said second quantity of glass rods forming a cylindrical preform cladding region surrounding said preform core region to provide a glass preform bundle;

inserting said glass preform bundle into a glass tube wherein said glass tube has an inside diameter chosen to contain said glass preform bundle, and wherein said glass tube is evacuated and sealed at first and second ends such that said preform bundle is enclosed under an internal pressure below 1 atmosphere, and wherein further said preform bundle is restrained at each end within said sealed glass tube by a porous packing plug; and

heating said glass tube and said glass preform bundle to a glass fusion temperature thereby causing said glass tube and said glass preform bundle to fuse in place to form a solid glass preform such that said preform core region radial and longitudinal chemical composition and said cladding region average refractive index are maintained.

41. (currently canceled)

42. (currently amended) The method of claim [~~39~~]40, wherein said step of heating further comprises moving of said glass tube and said glass preform assembly into a heated zone of a furnace means longitudinally such that begins at one end and slowly progresses along a length of said tube and said glass rods as said preform assembly is moved through said heated zone.

43. (original) The method of claim 42, wherein the furnace means is a tube furnace.

44. (original) The method of claim 42, further including rotating said preform assembly.

45. (original) The method of claim 44, wherein said preform assembly is heated to a temperature of about 1500°C.

46. (currently canceled)

47. (currently canceled)

48. (previously withdrawn and canceled)

49. (currently amended) The method of claim [~~39~~]40, wherein said second glass rods further comprise a co-dopant species for increasing the solubility of said one or more rare-earth dopant elements and for adjusting a refractive index.

50. (previously withdrawn and canceled)

51. (currently amended) The method of claim [~~39~~]40, wherein said first quantity of glass rods further comprise one or more dopant compounds for substantially reducing or eliminating amplified spontaneous emission.

52. (previously withdrawn and canceled)

53. (previously withdrawn and canceled)

54. (previously withdrawn and canceled)

55. (previously withdrawn and canceled)

56. (previously withdrawn and canceled)

57. (previously withdrawn and canceled)

58. (previously withdrawn and canceled)

59. (previously withdrawn and canceled)